JUL 11 2000

ACTION MEMORANDUM

DATE:

SUBJECT: Request for a Removal Action, Ceiling Increase and Exemption from the $2 Million and 12-Month Statutory Limits at the BCF Oil Refining Site, Brooklyn, New York

FROM: Thomas P. Budroe, On-Scene Coordinator
Removal Action Branch

TO: Jeanne M. Fox
Regional Administrator

THRU: Richard L. Caspe, Director
Emergency and Remedial Response Division

Site ID #: PU

I. PURPOSE

The purpose of this Action Memorandum is to request and document approval of the removal action described herein, an Exemption from the $2 Million and 12-month Statutory Limits and a Ceiling Increase for the BCF Oil Refining Site (Site) located at 360-362 Maspeth Avenue Brooklyn, Kings County, New York, 11211.

CONCURRENCES

Name: BCF Oil Refinery | Init: sb | Date: 06/30/00 | Filename: AM#0192

Symbol	ERRD-RAB	ERRD-RAB	ERRD-RAB	ORC-NYCSUP	ORC-NYCSUP	ERRD-DD	ERRD-D	DRA	RA
Surname	Budroe	Witkowski	Salkie	Carr	Simon	McCabe	Caspe	Muszynski	Fox
Date		6/30/00	6/30/00	7/11/00	7/11/00				7/12/00

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 2
290 BROADWAY
NEW YORK, NY 10007-1866

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Previous funding authorized by the Deputy Division Director's May 19, 2000, verbal authorization established a total project ceiling of $50,000 and a mitigation contract ceiling of $45,000. A second verbal authorization for $65,000, of which $50,000 is for mitigation contracting, was provided by the Division Director's on June 20, 2000, establishing a total project ceiling of $115,000 and a mitigation contract ceiling of $95,000. The removal action was initiated on May 25, 2000, and is on-going. Current actions consist of site control and security. The proposed ceiling increase of $4,837,000 would establish a new project ceiling of $4,952,000 to fund the removal of approximately 600,000 gallons of oil, water and sludge contaminated with polychlorinated biphenyls (PCBs) and other hazardous substances, demolition and removal of the contaminated tanks, removal of contaminated soil and other media.

As described in Sections II and III, the Site meets the criteria for a removal action under the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended (CERCLA), 42 U.S.C. §§ 9601-9675, as described in Section 300.415(b) of the National Contingency Plan (NCP).

The Site is not on the National Priorities List (NPL) and there are no nationally significant precedent setting issues associated with this proposed removal action.

II. SITE CONDITIONS AND BACKGROUND

The Comprehensive Environmental Response, Compensation, and Liability Information System number for this time-critical removal action is NYD068273044.

A. Site Description

1. Removal site evaluation

From 1980 to 1994 the Site was used by B.C.F. Oil Refining, Inc. (BCF) and its predecessor Calleia Bros, Inc., as a waste oil processing facility. The Site is currently abandoned. The Site is located at 360-362 Maspeth Avenue, Brooklyn, New York. The site location map is depicted in Figure 1 of Attachment 1. When it was in active operation, the facility processed various waste oils, tank bottoms and oily water mixtures to produce a fuel oil that was sold for use in commercial boilers. In 1994 the facility closed after PCB contamination was discovered in all but two of the tanks. Limited sampling indicates the concentrations of PCBs in the contaminated tanks range from less than 50 parts per million (ppm) to 630 ppm. At present, BCF continues to store the oil with high levels of PCBs in very old tanks of uncertain tightness and integrity. New York State law, 6 New York Code of Rules and Regulations §374-2.2(a)(2)(i)(a), requires that mixtures of used oil and hazardous wastes shall be regulated as hazardous wastes. Further, §374-2.2(a)(2)(i)(c) specifically provides that used oil containing PCBs over 50 parts per million is presumed to be a hazardous waste. As described above, PCBs have been found in the tanks at levels of up to 630 ppm.

The facility contains twelve underground storage tanks (USTs) (Tanks 1-10, 15, 16) for processing raw materials and four above ground storage tanks (ASTs) (Tanks 11,12, 14, 17) for storage of the finished products. The locations of the tanks are depicted on Figure 2 of Attachment 1. The facility had been operating under a New York State Department of Environmental Conservation (NYSDEC) Part 360 permit as a waste oil reprocessor since August 21, 1992 and was not authorized to handle hazardous waste. During operation, at least some of the incoming waste materials were first tested to determine that they met the requirements of the facility's NYSDEC Part 360 permit, which prohibited the intake of regulated hazardous wastes, including materials containing PCBs. After testing, the incoming materials were off-loaded into one of several underground tanks for processing. The materials were heated to induce separation of water and solids, filtered in the screen house, and blended to create a fuel oil similar in performance characteristics to a number 6 fuel oil. The finished material was then transferred to one of the four above ground tanks for storage and sale. During part of the period

of the facility's operation, BCF also conducted weekly testing of its finished product to ensure that it did not contain PCBs or unpermitted levels of halogenated solvents. BCF had a State Pollution Discharge Elimination System (SPDES) permit, and discharged waste water through its oil/water separator into English Kills.

In April of 1994, the contents of BCF's tanks were contaminated by PCBs. Records maintained by BCF and subsequent chemical testing indicate that the contamination may have been caused by one or more deliveries which contained a large quantity of PCB transformer oil. The contamination was discovered in the course of BCF's weekly testing of its processed oil. On or about August 3, 1994, BCF sampled the contents of each of the 16 tanks and submitted the samples to Dexsil Laboratory, Hamden, Connecticut for PCB analysis. Dexsil reported the presence of PCBs in all of the samples at concentrations ranging from 1 to 630 ppm. Concentrations exceeded 50 ppm in Tanks 2, 5, 11, 12, and 14. By the time site operations ceased, the PCB contamination had been circulated into and through a number of the underground and above ground tanks. NYSDEC reported that BCF staff were first notified on April 22, 1994 of the presence of hazardous waste, but accepted 316,231 gallons of waste in May 1994 and 228,208 gallons in June 1994. The facility closed in August 1994, but BCF thereafter maintained a minimal work force for security and maintenance of the premises.

In August 1994, the NYSDEC removed waste and residual materials in the fiberglass box-oil/water separator in the northwest area of the Site. The NYSDEC also rerouted the Site storm water drain pipes so that all storm water was directed to this oil/water separator. This oil/water separator discharges to English Kills. At some time later, the U.S. Coast Guard reportedly shut down the primary oil/water separator on Site by plugging the discharge line.

The NYSDEC refused to renew BCF's Major Onshore Storage Facility (MOSF) license by letter dated April 25, 1995, based upon the contamination at the facility.

In January 1995 under contract to BCF, Rust Environment & Infrastructure, Inc. (RUST) sampled the contents from two of the tanks for the purpose of determining the composition and concentration of the previously identified PCB contamination. The results of the 1995 study are described in RUST's report Analysis of Contaminated Oil, BCF Oil Refinery, Brooklyn, NY, dated August 1996. The 1996 RUST report revealed that eight of the USTs and two of the ASTs contained oil or oil/water mixtures with PCB concentrations between 6 and 42 ppm. The contents of three USTs (nos. 2, 5, 12) and two ASTs (nos. 11 and 14) were found to be contaminated with PCBs at concentrations between 99 and 525 ppm.

On April 18, 1995, CH2M Hill, Inc. , sampled BCF's four ASTs and 12 USTs on behalf of Consolidated Edison Company of New York, Incorporated. Composite samples were collected, subsequently split with RUST and analyzed for PCBs. The results of the PCB analyses were similar, with some moderate differences, to the PCB results obtained by RUST's split sample analysis.

During the above study, analysis of the oil in the AST with the highest PCB concentration (no. 11) indicated isomers of dichlorobenzene and trichlorobenzene at concentrations ranging from 2 to 220 ppm. Other halogenated compounds detected included trichloroethylene, 1,1,1-trichloroethane, perchloroethylene and two chlorofluorocarbon compounds. These compounds were detected at concentrations up to 41 ppm. Benzene, toluene, ethyl benzene, xylenes and other volatile organic compounds were also detected.

In May 1997, RUST measured sediment, sludge, water, oil/water emulsions and oil in each tank. The approximate depth to the oil/water interface was measured with an oil/water interface probe, and the depth to the sediment/sludge layer was measured by probing with a metal rod. It was determined that there is approximately 597,000 gallons of sludge, oil and water in the BCF tanks on-site. Of this total, approximately 359,000 gallons are oil; 72,000 gallons are water or water with emulsified oil; and 171,000 gallons are sludge and solids.

Analytical results of the tank contents from the May 1997 RUST sampling indicated PCB contamination in 12 of the 16 tanks, with the highest concentration of PCBs being 490 ppm.

In May 1997, RUST also collected an oil sample from tank 11, which was analyzed for target analyte list (TAL) and toxicity characteristic leaching procedure (TCLP) parameters. TAL analysis of the above oil sample evidenced the following hazardous substances: copper, lead and zinc. During a 1998 Preliminary Subsurface Investigation (PSI), RUST gauged seven on-site monitoring wells with an interface probe to determine the thickness of any petroleum product accumulation in the wells. Monitoring well MW-1, located at the edge of Maspeth Avenue adjacent to the facility's loading racks, contained approximately 3.74 feet of brown-colored product having a consistency similar to Number 2 Oil. Monitoring well MW-6, located on the southern side of the Site, contained a viscous, dark-brown to black petroleum substance which fouled the interface probe and prevented accurate measurement of the petroleum/water interface. RUST collected groundwater samples from three monitoring wells (these wells were installed prior to 1993 as a condition of the Facility's NYSDEC MOSF License). Analysis of the groundwater samples evidenced the following hazardous substances: benzene, ethylbenzene, isopropylbenzene, naphthalene, xylene and toluene.

The June 1998 PSI report prepared by RUST stated that, based on very limited data, groundwater would be expected to flow toward Maspeth Avenue and Newtown Creek.

The groundwater elevation is between two and ten feet below the ground surface and is influenced by tidal effects.

In May 1998, RUST collected soil samples from six soil boring locations using a Geoprobe. Samples were collected at intervals from 0 to 4 feet, 4 to 8 feet, 8 to 12 feet and 12 to 16 feet below grade. Photoionizaton Detector (PID) screening of these samples indicated volatile organic compounds (VOCs) as high as 2672 ppm. Analysis of the above soil samples evidenced the following hazardous substances: benzene, ethylbenzene, isopropylbenzene, naphthalene, xylene,

toluene, acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd)pyrene, naphthalene, phenanthrene, pyrene and aroclor 1254.

The August 1998 soil boring report prepared by RUST stated that the petroleum hydrocarbon contamination of varying characteristics was found in a number of locations. The report further stated that the contamination is present in the non-aqueous phase (i.e. liquid hydrocarbon compounds (LHC)) and is retained in the saturated and unsaturated zones. This report also stated that the LHC in the vicinity of a single monitoring well near the loading rack appears to be present in mobile quantities capable of migrating through the soil above the water table. The report further stated that in other areas, LHC appears to be present at residual saturation and therefore unable to migrate in the non-aqueous phase.

The December 1999, DRAFT WORK PLAN CLOSURE OF BCF OIL REFINING FACILITY prepared by Earth Tech, Inc., for BCF stated that petroleum sheens are present on the water in English Kills. Sheens near the Site may be partially attributable to seepage of petroleum product from the Site as well as from a number of other potential sources adjacent to BCF and English Kills.

EPA received a March 24, 2000, letter from the NYSDEC requesting EPA to perform an appropriate CERCLA/SARA authorized emergency response action at the Site. During a site visit conducted by U.S. Environmental Protection Agency (EPA) on March 29, 2000, EPA observed some staining of the banks of English Kills at the site boundaries and a slight sheen on the water in this same area.

During EPA's second Site visit, conducted on April 4, 2000, EPA observed approximately 65 55-gallon steel drums (55 GSDs) and approximately fifteen 85-gallon steel overpack (salvage) drums. An employee of BCF informed EPA that these drums contain solids, sludge, oil and water from the NYSDEC funded clean-out of the secondary oil/water separator. Some of these drums may have also been generated from the solids discharged by the screen shakers.

At that time, EPA also observed two covered rolloffs with a volume of approximately 15 cubic yards each. An employee of BCF informed EPA that these two rolloffs contain solid waste.

During the second Site visit, EPA observed a vacuum trailer connected to a dilapidated tractor. An employee of BCF informed EPA that the trailer is 50 percent full of a mixture of motor oil and transmission fluid. This BCF employee also informed EPA that he believed a second vacuum trailer observed on-site and a 500 gallon diesel fuel UST located in the northwest area of the Site are empty. However, the second vacuum trailer and diesel fuel UST have not been decontaminated or decommissioned and may contain residual contamination.

During the second site visit, EPA also observed four sea land containers (trans modal containers) present on the Site. These contained in part, five gallon pails of fire foam, empty 55 GSDs,

insulation, 55 GSDs with unknown contents, trash and junk.

On May 26, 2000, BCF terminated security and any maintenance interest in the facility after notifying EPA. Because the Site was effectively abandoned, EPA authorized funding for the Site and initiated Site security and control beginning on May 25, 2000.

The Site meets the definition of a facility under Section 101(9) of CERCLA, 42 U.S.C. § 9601(9). There has been a release or threat of release of CERCLA hazardous substances to the environment at the Site.

2. Physical location

The Site is approximately 1.85 acres and is situated on Block 2927, Lot 110, on the north bank of English Kills at 360-362 Maspeth Avenue, in Brooklyn, New York. The facility is bordered on the east by a gasoline and fuel oil distribution terminal, on the north by Maspeth Avenue and then the Brooklyn Union Gas Company, on the west by light manufacturing and industrial supply facilities and on the south by English Kills. English Kills feeds into Newtown Creek which in turn drains into the East River. Although the Site is located in a commercial area, residences are present within a half mile southwest of the Site.

Soil borings performed by RUST encountered an upper fill layer consisting of a variable mixture of fine to medium sand, fine to medium gravel, ash, slag and bricks. Below this fill layer was a zone of sand and clayey, sandy silt. The saturated zone was generally encountered approximately six to eight feet below the ground surface.

3. Site characteristics

Based on historical Sanborn Map Company fire insurance maps, the majority of the Site was created sometime after 1907 by filling an embayment on the shore of English Kills. From around 1933 until 1979 the Site was used as a petroleum distribution terminal, and was operated by Chevron Corp., among others. In approximately 1980, the terminal was modified for use as a waste oil processing facility and was then operated by Calleia Bros,. Inc. and BCF from1980 to 1994.

The Site is completely fenced on three sides of the property. The fourth side is bordered by English Kills, which has steep banks at this location.

The principal features of the facility include:

a) Ten 20,000 gallon heated, steel USTs (nos. 1-10) previously used for oil/water separation and temporary storage, processing and blending of waste materials;

b) One 150,000 gallon heated, steel UST divided into two chambers (tank nos. 15and

16), previously used for heating waste materials and separation of solids and water;

c) Four heated, 110,000 gallon vertical ASTs (nos.11, 12, 14, 17) within a concreted secondary containment dike, previously used for storage of finished product;

d) Oil/water separation tank currently being used for storm water abatement;

e) A loading rack located on Maspeth Avenue for dispensing product to trucks;

f) A two story, masonry structure housing two vibratory screen shakers for filtering solids;

g) Three single-story masonry structures housing offices, a testing laboratory, three steam generating boilers for heating the tanks and storage areas; and

h) A dilapidated wooden dock, approximately 45 foot long, running perpendicular to English Kills banks into the water. Piping runs from the Site to the end of the dock.

The tanks at the facility reportedly range in age from 30 to 70 years, with some installed in the 1930's and several installed in the 1960's and 1970's. In April 1993, a Tracer Tight precision tightness test was reportedly performed on five USTs (tanks 1, 2, 5, 10 & 15) and three ASTs (tanks 11,12 & 14). No tracer was detected in any of the soil gas samples, and all of the tanks passed the Tracer Tight test.

In May of 1997, RUST measured the thickness of the layers and calculated the volumes of the waste materials in the tanks. The measurements obtained were approximate because the interface between some of the layers is gradational. As summarized in Table 1, there are a total of approximately 598,000 gallons of sludge, oil and water in the tanks.

Table 1: Estimated Tank Waste Quantities in Gallons

Tank Number	Total Volume	Total Product	Oil Volume	Aqueous Volume	Sludge Volume
1	20,000	18,392	1,260	11,460	5,672
2	20,000	19,602	8,500	2,300	8,802
3	20,000	19,506	7,260	3,360	8,886
4	20,000	19,771	5,740	1,120	12,911
5	20,000	11,468	8,820	8,532	0
6	20,000	16,961	4,060	380	12,521
7	20,000	14,741	6,820	1,120	6,801
8	20,000	16,961	760	3,760	12,441
9	20,000	18,392	2,060	7,980	8,352
10	20,000	13,011	3,680	9,000	331

11	110,000	86,795	86,795	0	0
12	110,000	83,768	83,768	0	0
14	110,000	72,329	72,329	0	0
15a	20,000	19,082	0	5,680	13,402
15b	20,000	19,102	4,620	0	14,482
15c	20,000	19,202	0	6,440	12,762
15d	20,000	19,182	3,280	3,860	12,042
15e	20,000	17,601	240	3,520	13,841
16a	25,000	17,375	500	2,250	14,625
16b	25,000	17,250	1,500	2,125	13,625
17	110,000	57,190	57,190	0	0
Total	790,000	597,680	359,182	72,887	171,495

Note: *Tanks 15a - 15e are equal subsections and 16a - 16b are equal subsections of the same 100,000 gallon tank.*

The facility had been operating under a NYSDEC Part 360 permit as waste oil reprocessor since August 21, 1992, and was not authorized to handle hazardous waste.

The proposed removal action addressed by this Action Memorandum is the first removal action conducted at the Site.

4. Release or threatened release into the environment of a hazardous substance, or pollutant, or contaminant;

Laboratory analyses of samples collected from the USTs and ASTs revealed the presence of VOCs, semivolatile organic compounds (SVOCs), PCBs, metals and other analytes. A list of the most significant contaminants found in the USTs and the maximum concentration detected is presented below in Table 2. These materials are Comprehensive Environmental Response Compensation and Liability Act (CERCLA) designated Hazardous Substances, as listed in 40 CFR § 302.4.

Table 2: Organic Results for Tank 11 Waste Oil

VOCs

Compound	Concentration (ppm)
Benzene	27
1,2-Dichlorobenzene	11
1,3-Dichlorobenzene	1.9 J
1,4-Dichlorobenzene	5.5 J
Dichlorodifluoromethane	1.3 J
Ethyl Benzene	110 B
Isopropylbenzene	44

Naphthalene	380 BJ
Tetrachloroethene	41
Toluene	270 D
1,2,4-Trichlorobenzene	160 BD
1,1,1,-Trichloroethane	36
Trichloroethene	16
Trichlorofluoromethane	61
0-Xylene	170 D
m&p-Xylene	430 D

SVOCs

Compound	Concentration (ppm)
Acenaphthene	97 J
Anthracene	43 J
Benzo(a)anthracene	24 J
Chrysene	52 J
Bis(2-ethylhexyl)phthalate	120
Fluorene	100
Naphthalene	510
Phenanthrene	310
Pyrene	89 J
1,2,4-Trichlorobenzene	220

PCB - Aroclor 1260

Tank #	April 1995 Analysis Concentration (ppm)	May 1997 Analysis Concentration (ppm)
1	6.7	30
2	92.5	89
3	42.4	340
4	12.8	29
5	109	100
6	28.6	27
7	30.3	43
8	3.29	4.70 U
9	0.50 U	4.80 U
10	1.60 U	4.70 U
11	398	490
12	99.2	80
14	174	290
15	1.32	24
16	3.91	30

17	7.14	4.90 U

Data Qualifiers

U *The compound was analyzed for but not detected at or above the quantitation limit indicated.*

J *The compound was analyzed for and determined to be present in the sample because the mass spectrum of the compound meets the identification criteria of the method. The concentration reported is an estimated value, less than the practical quantitation limit for the sample.*

B *The compound is also found in an associated blank.*

D *The reported value is taken from an analysis of a diluted sample.*

Metals

Compound	Concentration (ppm)
Barium*	28.1
Copper	4.7
Lead	19.6
Zinc	84

*** not a CERCLA listed hazardous substance**

Hazardous substances have been released or are threatened to be released from the USTs and ASTs to the environment. Hazardous substances were detected in groundwater and subsurface soil samples collected near the USTs and ASTs. In May 1998, RUST collected groundwater samples from three monitoring wells. Analysis of the groundwater samples evidenced the following hazardous substances: benzene, ethylbenzene, isopropylbenzene, naphthalene, xylene, toluene. During this same period RUST also collected soil samples from six soil boring locations using a Geoprobe. Analysis of the above soil samples evidenced the following hazardous substances: benzene, ethylbenzene, isopropylbenzene, naphthalene, xylene, toluene, acenaphthene, anthracene, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, benzo(ghi)perylene, benzo(k)fluoranthene, chrysene, dibenzo(a,h)anthracene, fluoranthene, fluorene, indeno(1,2,3-cd) pyrene, naphthalene, phenanthrene, pyrene and aroclor 1254.

In addition, as a result of the Site's operation as a treatment, storage and disposal facility, and the presence of regulated hazardous waste and other hazardous substances at the Site for at least six years, if not longer, and BCF's failure to dispose of such hazardous wastes and hazardous substances, there has been an abandonment and/or disposal at the Site within the meanings of the Resource Conservation and Recovery Act (RCRA) and CERCLA. See Sections 101(22) and (29) of CERCLA, 42 U.S.C. § 9601(22) and (29), Section 1004(3) of RCRA, 42 U.S.C. § 6903(3), and 40 CFR § 261.2. As a result of this abandonment and/or disposal, there has been a release, as defined in Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

5. NPL status

The Site is not on the NPL.

6. Maps, pictures and other graphic representations

Please refer to Attachment 1, Figures 1 and 2 for site location and site layout.

B. Other Actions to Date

1. Previous actions

On April 18, 1991, NYSDEC and BCF entered into a Consent Decree which directed BCF to pay a total of $50,000 in penalties, to diligently further its NYSDEC Part 360 permit application, complete its MOSF permit application and comply with its SPDES permit.

Seven monitoring wells were installed prior to 1993 as a condition of the Facility's MOSF License.

On March 3, 1994, a Consent Decree between EPA and BCF was lodged with the federal District Court, Eastern District of New York, directing BCF to pay $100,000 in civil penalties and to follow specific procedures regarding plant operations and testing of the waste materials prior to acceptance into the facility and of the finished product prior to sale.

On August 19, 1994, NYSDEC initiated an emergency cleanup at the Site in order to prevent flooding of the facility and subsequent release and migration of contamination from the USTs and storm water abatement system. NYSDEC's contractor removed oil and sludge from the storm water oil-water separator and the separator was cleaned. The oil and sludge resulting from this cleanup is being stored in drums on-site. Storm water drainage was diverted to the cleaned oil/water separator and is discharged into English Kills, bypassing the industrial waste water treatment system.

RUST was contracted by BCF to conduct sampling and analysis of various media at the Site and subsequently prepared the following reports: Analysis of Contaminated Oil B.C.F. Oil Refinery, Brooklyn, New York dated August 1996, Preliminary Subsurface Investigation B.C.F. Oil Refining Facility dated June 1998, and Project Scoping Plan Restoration of B.C.F. Oil Refining Facility dated August 1998.

EPA received a March 24, 2000, letter from the NYSDEC requesting EPA to perform an appropriate CERCLA/SARA authorized emergency response action at the Site.

On May 19, 2000, the EPA Acting Director of the Emergency and Remedial Response Division granted verbal authorization to conduct a removal action at the Site.

EPA initiated site security on May 25, 2000, in response to a letter from BCF's legal counsel stating that site security would be terminated by BCF on May 26, 2000.

2. Current actions

EPA is providing site security and control. The AST and UST fire suppression system was tested on June 21, 2000.

C. State and Local Authorities' Roles

1. State and local actions to date

In addition to State actions described in Section II.B.1., NYSDEC has monitored and reacted to violations of BCF's various permits.

NYSDEC refused to renew BCF's MOSF license by letter dated April 25, 1995, based upon the contamination of the facility. In that letter NYSDEC references BCF's claim that it did not have the funds to pay for the clean-up.

BCF had proposed to finance the clean-up of the facility by allowing it to restart the operation of the Site, using the income to finance the removal of the wastes and the upgrade of the facility. Various reports regarding this option were submitted in early 1999. Negotiations continued through the early summer, when issues arose over the Toxic Substances Control Act (TSCA) "contact rule", regarding the classification of the wastes for disposal and whether the underground tanks could be closed in place and new tanks constructed on top of them. On December 9, 1999, NYSDEC advised BCF in writing regarding the permits which would be required as well as the removal, investigative and remedial activities that must occur before operations could start up again.

On December 13, 1999, BCF advised NYSDEC that it no longer wanted to restart site operations, but rather wanted to remove all on-site wastes, clean and sell the Site. Subsequently, negotiation of a consent order occurred, and a draft work plan addressing closure activities was submitted to the NYSDEC on or about December 31, 1999. After further negotiations were unsuccessful, NYSDEC referred the Site to EPA on March 24, 2000.

2. Potential for continued State/local response

It is presently anticipated that upon completion of the proposed removal activities, the Site will be referred back to the State of New York. NYSDEC may conduct additional investigations to determine the impacts of the release of contaminants from the Site to the environment.

III. THREATS TO PUBLIC HEALTH, OR WELFARE, OR THE ENVIRONMENT AND STATUTORY AND REGULATORY AUTHORITIES

The release or threatened release of hazardous substances from the Site pose a threat to the public health, welfare and the environment. Conditions at the Site meet the requirements of Section

300.415(b) of the NCP for undertaking a CERCLA removal action. Factors from NCP Section 300.415(b)(2) that support conducting a removal action at the Site include:

(i) Actual or potential exposure to nearby human populations, animals, or the food chain from hazardous substances, or pollutants, or contaminants;

There is approximately 600,000 gallons of waste oil, sludge and water stored in ASTs, USTs, rolloffs, tank trailers and drums on Site. These materials are largely contaminated with PCBs and other hazardous substances. Due to the age and physical condition of these tanks, there is a potential hazard that one or more of the tanks will fail and the contaminated waste oil will be released into the environment. The drums containing oil, sludge and water from the NYSDEC clean out of the oil-water separator have never been analyzed and may be contaminated by PCBs. These drums have been sitting outside exposed to the elements since they were generated in August 1994. These drums could potentially begin leaking at any time and due to corrosion and could release their contents if physically disturbed. Hazardous substances released from USTs could migrate off-site and impact groundwater and/or surface waters, substantially increasing the cost of the required cleanup. English Kills flows into Newtown Creek, which in turn flows into the East River. A release of hazardous substances from one or more of the USTs, which are located less than 100 feet from English Kills, could migrate into and through the above waterways, impacting animals or the food chain. In addition, the Site is bordered on the east by a gasoline and fuel oil distribution terminal, on the north by Maspeth Avenue and then the Brooklyn Union Gas Company, on the west by light manufacturing and industrial supply facilities and on the south by English Kills. Although the Site is located in a commercial area, residences are present within a half mile southwest of the Site. A catastrophic release could potentially expose nearby workers, residents or emergency response personnel to the hazardous substances present at the Site.

(ii) Hazardous substances, or pollutants, or contaminants in drums, barrels, tanks, or other bulk storage containers, that may pose a threat of release;

There is approximately 600,000 gallons of waste oil, sludge and water on Site. These materials, largely contaminated with PCBs, are stored in ASTs, USTs, rolloffs, tank trailers and drums. The tanks at the facility range in age from approximately 30 to 70 years. Due to the age and physical condition of these tanks, there is potential hazard that one or more or the tanks will fail and the contaminated waste oil will be released into the environment. There are approximately twelve USTs of varying age, some of which were installed in the 1930's. The structural integrity of these tanks is unknown. Un-lined tanks of this age together with the absence of maintenance and monitoring presents a high risk of leaking or otherwise releasing their contents into the environment. In addition, there are four ASTs which contain the largest volume of contaminated oil with some of the higher concentrations of PCBs. All of these tanks have patches of rust on them. The condition of the ASTs will only worsen with time as they are not protected from the elements. The tanks and connecting pipes have not been painted, cleaned or otherwise maintained since the plant closed. Since most of the tanks are interconnected, a failure in one tank or line

may lead to a release of contaminated material from one or more additional tanks or lines. NYSDEC has reported that the secondary containment for the ASTs do not meet their regulatory requirements. Moreover, there are cracks in the secondary containment walls and the concrete floor of the containment area is incomplete. Therefore, the secondary containment area would not sufficiently contain a release from the ASTs. The drums containing oil, sludge and water from the NYSDEC clean out of the oil-water separator have never been analyzed and may be contaminated with PCBs and other hazardous substances. These drums have been sitting outside exposed to the elements since they were generated in August 1994. These drums could potentially begin leaking at any time and due to corrosion and could release their contents if physically disturbed. Hazardous substances released from the USTs could migrate off-site and impact groundwater and/or surface waters, substantially increasing the cost of the required cleanup. A release of hazardous substances could migrate into English Kills, which borders the southern edge of the Site less than 100 feet from the ASTs.

(iii) Actual or potential contamination of drinking water supplies or sensitive ecosystems;

English Kills, which borders the southern Site boundary, flows into Newtown Creek which in turn flows into the East River. Approximately 300,000 gallons of waste oil, sludge and water contaminated with PCBs and other hazardous substances are presently stored in the four ASTs. The specific age of these tanks is unknown at this time, but the tanks at the facility range in age from 30 to 70 years. All of these tanks have patches of rust on them and this condition will only worsen with time as they are outdoors without protection from the elements. Due to the age and physical condition of these tanks, there is potential hazard that one or more or the tanks will fail and the PCB-contaminated waste oil will be released into the environment. The NYSDEC has reported that the secondary containment for the ASTs do not meet the regulatory requirements. Moreover, there are cracks in the secondary containment walls and the concrete floor of the containment area is incomplete. A release of hazardous substances from one or more of the USTs, which are located less than 100 feet from English Kills, could migrate into and through the above waterways, impacting sensitive ecosystems.

(iv) Weather conditions that may cause hazardous substances, or pollutants, or contaminants to migrate or be released; and

Floating product on the groundwater and analytical results indicate that the site groundwater and soils are contaminated. Water in the form of precipitation percolating through the contaminated soil may cause the contaminants to migrate through the soil and discharge into English Kills through the earth/stone wall which borders the southern side of the Site.

Groundwater flow is influenced by a number of factors, including the presence of sewers, buried gas pipelines and tidal fluctuation of Newtown Creek. The water table beneath the Site is expected to fluctuate erratically under the tidal influence of Newtown Creek. The single round of groundwater elevation measurements conducted during RUST's investigation suggests a temporal

gradient toward Maspeth Avenue and English Kills. This gradient may lessen or even reverse direction during low tide or certain seasonal conditions. Percolation of precipitation may cause the contaminants to mobilize and migrate into the groundwater. The precipitation water in synergy with the tidal fluctuations of English Kills may cause the contaminated groundwater to be released to English Kills and to otherwise migrate.

(v) The availability of other appropriate federal or State response mechanisms to respond to the release.

No other government entity can address the Site within an appropriate time-frame. In a March 24, 2000 letter, NYSDEC requested that EPA undertake a removal action at the Site.

IV. ENDANGERMENT DETERMINATION

Actual or threatened releases of hazardous substances from the Site, if not addressed by implementing the response action selected in this Action Memorandum, may present an imminent and substantial endangerment to public health, or welfare, or the environment.

V. EXEMPTION FROM STATUTORY LIMITS

Conditions at the Site and the proposed actions meet the criteria for an emergency exemption as specified in CERCA Section 104 (c). There are immediate risks to public health and the environment and continued actions are immediately required to prevent limit or mitigate an emergency. Neither the State, county or local government can address the Site within an appropriate time-frame.

A. Emergency Exemption

1. There is an immediate risk to public health, or welfare, or the environment.

A potential release of hazardous substances from USTs, ASTs, drums, rolloffs and tank trucks is at the Site. Approximately 600,000 gallons of PCB contaminated materials are present at the Site. Other CERCLA hazardous substances including benzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, dichlorodifluoromethane, ethyl benzene, isopropylbenzene, tetrachloroethene, toluene, 1,2,4-trichlorobenzene, 1,1,1,-trichloroethane, trichloroethene, trichlorofluoromethane, o-xylene, m&p-xylene, 1,2,4-trichlorobenzene, copper, lead and zinc are present in at least one AST on-site. The USTs, ASTs and affiliated piping have not been maintained or tested since the facility closed in 1994. Moreover, the secondary containment for the ASTs contains cracks in the concrete walls and the concrete floor is incomplete. A release from any of these tanks would certainly migrate into the soil and potentially into the groundwater and could potentially be released into English Kills. The USTs may already be leaking contaminated materials into the soils, groundwater and through surface discharge into English Kills. The drums on Site have been filled with waste materials for approximately six years.

These drums were not protected from the elements and could catastrophically fail and release the contained material.

2. Continued response actions are immediately required to prevent, limit, or mitigate an emergency.

There is an imminent threat of a release of material from the USTs, ASTs, drums, rolloffs and tank trucks and a threat of hazardous substances subsequently migrating into the environment. If immediate action is not taken to remove the contents of the USTs, ASTs, drums, rolloffs and tank trucks hazardous material could be released into the environment increasing the cost of the required cleanup. Released hazardous substances could migrate to groundwater and surface water, damage natural resources and threaten the health of local workers and residents.

3. Assistance will not otherwise be provided on a timely basis.

Addressing the immediate threats to public health and the environment from the release or threat of release of hazardous substances from the Site will not be provided on a timely basis. Neither State nor local government is able to remove the hazardous substances from the Site in a timely fashion.

VI. PROPOSED ACTIONS AND ESTIMATED COSTS

A. Proposed action

1. Proposed action description

A CERCLA removal action continues to be warranted at this time. A ceiling increase and an exemption from the $2 Million and 12-month Statutory Limits are necessary to conduct the following tasks at the Site:

1. Continue providing 24-hour site control, maintenance and security as is currently being conducted;

2. Install and maintain a containment boom along the entire length of the southern property lines at the shoreline of English Kills;

3. Sample all ASTs, USTs, roll-off containers, tank truck contents, and 55- gallon drums to characterize the materials for disposal;

4. Remove all materials contained in the ASTs and USTs and appropriately treat/dispose of all materials off-site;

5. Empty, decontaminate and remove all surface and subsurface piping, valves and

other appurtenances related to the ASTs and USTs (including the loading rack along Maspeth Avenue and the pipes on the dock extending into English Kills) and appropriately treat/dispose of same off-site;

6. Demolish all ASTs and appropriately treat/dispose of same;

7. Excavate, remove and demolish all USTs and appropriately treat/dispose of same. Conduct post-excavation sampling and analysis of soil, excavate and treat/dispose of all visually contaminated soils;

8. Conduct grid sampling of surface and subsurface site soils. All samples will be analyzed for TAL, Polyaromatic Hydrocarbons and PCBs. Excavate soils exceeding the cleanup criteria and treat/dispose of contaminated soils off-site;

9. Install silt fencing and other temporary barriers in conjunction with excavation operations to reduce contaminant migration via surface water runoff;

10. Backfill excavated areas to an appropriate grade with clean fill verified as such based on TAL and TCL analysis and meeting appropriate NYSDEC levels;

11. Vegetate affected areas with grass;

12. Appropriately treat/dispose of all 55-gallon and overpack (85-gallon salvage) drums off-site;

13. Appropriately treat/dispose of the material in the two roll-off containers and the two vacuum trailers off-site. Decontaminate the above roll-off containers and vacuum trailers;

14. Remove and appropriately treat/dispose of all debris, oils, sludges and drums in the screen house. Decontaminate and/or appropriately treat/dispose of all equipment in the screen house;

15. Demolish the screen house and appropriately treat/dispose of the resulting debris; and

16. Redevelop and sample all existing ground water monitoring wells. All samples will be analyzed for TAL and TCL parameters.

2. Contribution to remedial performance

The removal action at the Site is consistent with the requirement of Section 104(a)(2) of CERCLA, which states, "any removal action undertaken...should...to the extent practicable,

contribute to the efficient performance of any long-term remedial action with respect to the release or the threatened release concerned." Any remedial action undertaken would encompass the elements in this response, this removal action is consistent with any future remedial work.

3. Description of alternative technologies

Because of the quantities and types of the hazardous substances and/or wastes at the Site, on-site treatment and/or incineration is not appropriate. The selected removal action includes the characterization of the hazardous substances found at the Site and the transportation of these sources off-site for treatment and/or disposal. The selected removal action has been determined to be the appropriate response action for the Site based upon the criteria of effectiveness, implementability and cost.

4. Engineering Evaluation/Cost Analysis (EE/CA)

Due to the time-critical nature of this removal action, an EE/CA will not be prepared.

5. Applicable or relevant and appropriate requirements (ARARs)

ARARs that are within the scope of this removal action, which pertain to the cleanup and disposal of hazardous waste, will be identified and addressed to the extent possible. Federal ARARs determined to be applicable this removal action are RCRA and TSCA.

6. Project schedule

Approval of funding will initially be used to provide Site security and control while EPA pursues the potential to enter into an order with potential responsible parties (PRPs) to conduct the removal action. If an order cannot be signed with a private party then, with EPA funding, approximately ten months will be required to complete the work described in this memorandum.

B. Estimated Costs

	Current Ceiling	Additional Funds Requested	Proposed Ceiling
Extramural Costs			
Regional Allowance Costs:			
ERRS Contractor Costs Includes Contingency	$ 95,000	$4,030,392	$4,125,392
Other Extramural Costs Not Funded From the Regional Allowance:			
U.S. Coast Guard	$ 0	$ 70,800	$ 70,800

START Costs	$ 15,000	$ 187,296	$ 202,296
Total Extramural Costs	$110,000	$4,288,488	$4,398,488
Intramural Costs			
Intramural Indirect Costs	$ 5,000	$ 548,496	$ 553,496
Total Intramural Costs	$ 5,000	$ 548,496	$ 553,496
TOTAL PROJECT CEILING	**$115,000**	**$4,836,984**	**$4,951,984**
TOTAL ROUNDED	**$115,000**	**$4,837,000**	**$4,952,000**

VI. EXPECTED CHANGE IN THE SITUATION SHOULD ACTION BE DELAYED OR NOT TAKEN

Delayed action will increase the risk to public health and the environment from the potential release of hazardous substances from ASTs, USTs, drums, rolloffs or tank trailers to the environment. Since the USTs have not been maintained or tested in approximately six years, the USTs could already be leaking and discharging hazardous substances to the environment including English Kills.

VII. OUTSTANDING POLICY ISSUES

None.

VIII. ENFORCEMENT

A combined notice/information request letter was sent to BCF and its President on April 28, 2000. On May 23, 2000, 49 combined notice/information request letters were also sent to transporters who brought waste to the Site.

IX. RECOMMENDATION

This decision document represents the selected removal action for the BCF Oil Refining Site located at 360-362 Maspeth Avenue Brooklyn, New York, developed in accordance with CERCLA, as amended, and not inconsistent with the NCP. This decision is based on the administrative record for the Site.

Conditions at the Site meet the NCP section 300.415(b)(2) criteria for a removal action and the CERCLA Section 104(c) criteria for an emergency exemption from the $2 million and 12-month limitations. I recommend your approval of the proposed action and the proposed ceiling increase of $4,837,000. The total project ceiling if approved will be $4,952,000 of which an estimated $4,125,392 is for mitigation contracting.

Enforcement efforts are proceeding and one or more interested parties and/or PRPs may sign a consent order with the EPA. EPA will therefore continue negotiations with the above parties

prior to commencing the entire scope of work outlined in this document. In the meantime, funds will be required to conduct security, Site control and sampling of on-site wastes. Contingent upon the approval of this memorandum, an additional $233,000 will be obligated from this year's advice of allowance for mitigation contracting to conduct this work.

Sufficient funding is available in the current Advise of Allowance to finance this project.

Please indicate your approval and authorization of funding for the BCF Oil Refining Site, as per current Delegation of Authority, by signing below.

Approval: _____ **Date:** 7/13/02
Jeanne M.. Fox
Regional Administrator

Disapproval: _____ **Date:** _____
Jeanne M. Fox
Regional Administrator

cc: (after approval)
W. Muszynski, DRA
R. Caspe, ERRD-D
R. Salkie, ERRD-RAB
J. Witkowski, ERRD-RAB
B. Dease, ERRD-RAB
B. Bellow, CD
P. Simon, ORC-NYCSUP
B. Carr, ORC-NYCSUP
R. Gherardi, OPM-FIN
K. Weaver, OPM-FIN
C. Moyik, ERRD-PS
T. Johnson, 5202G
M. O'Toole, NYSDEC
D. Koehling, NYSDEC
R. Gardineer, NYSDEC
P. McKechnie, IG
A. Raddant, DOI
G. Wheaton, NOAA
O. Douglas, START
G. Barbara, NYCFD

ATTACHMENT 1

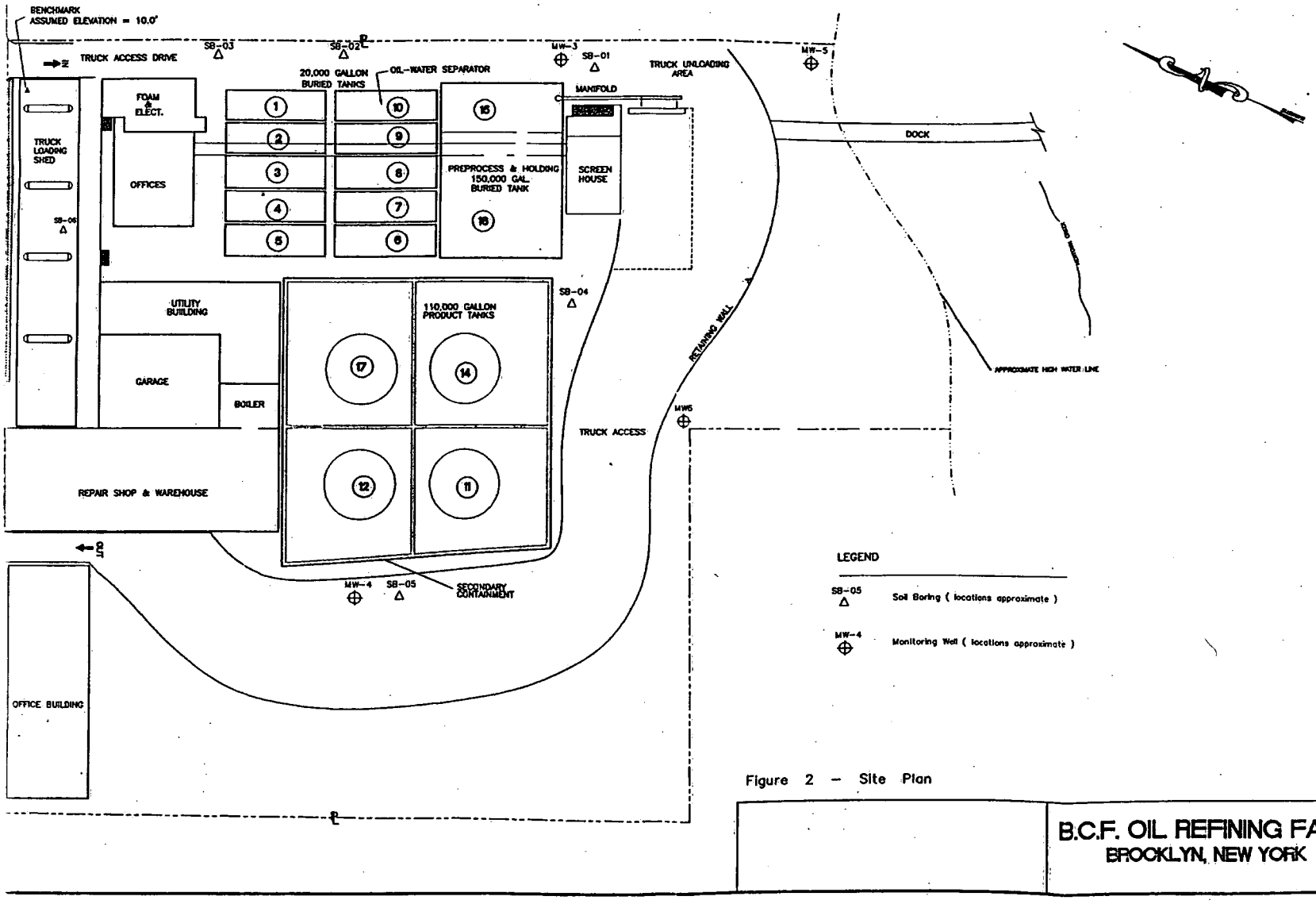
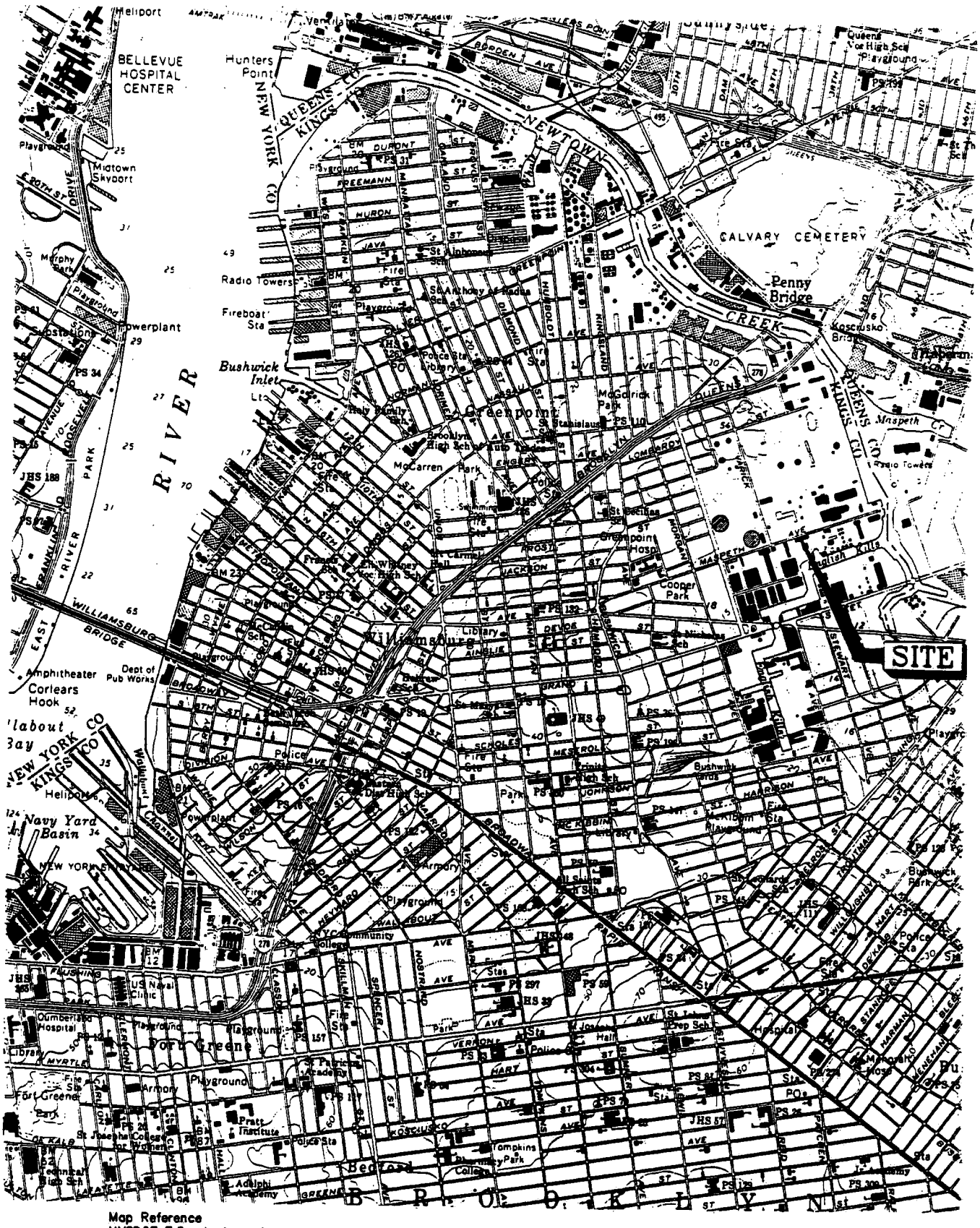


Figure 2 – Site Plan

B.C.F. OIL REFINING FACIL
BROOKLYN, NEW YORK



Map Reference
NYSDOT 7.5 minute series
Brooklyn Quadrangle, Rev. 1975

Figure 1 – Location Map

B.C.F. OIL REFINING FACILITY
360 MASPETH AVENUE
BROOKLYN, NEW YORK 11211

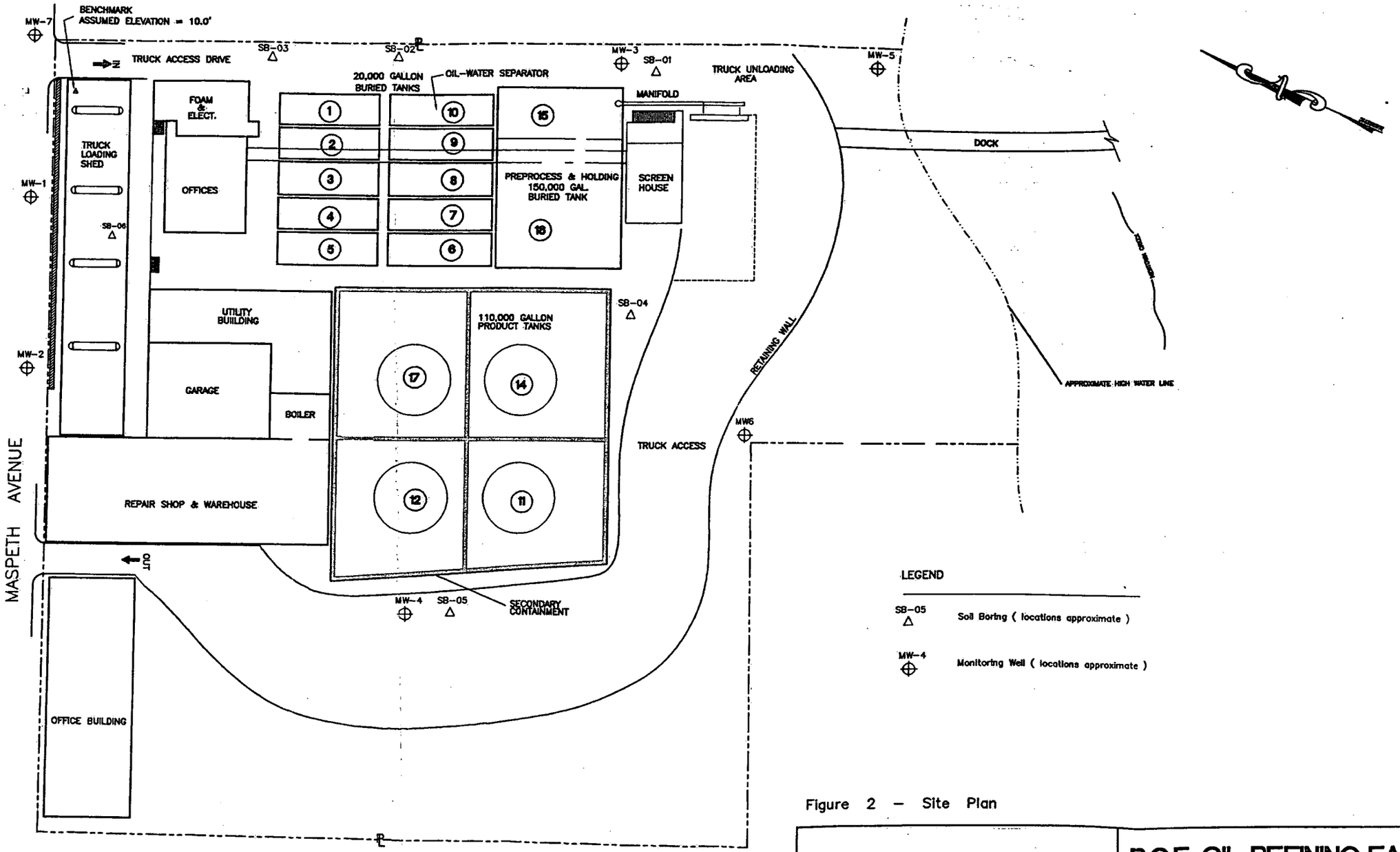


Figure 2 – Site Plan

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